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AMATEUR RADIO DIGITAL COMMUNICATIONS

November/December 2024



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In this issue...

- [Happy Holidays – and it's Time for ARDC's Winter Break](#)
- [Upcoming Community Deadlines and Notices](#)
- [Grantee Updates](#)
- [What ARDC Has Been Up To](#)
- [ARDC Welcomes New Staff Members](#)
- [Introducing New Members of ARDC's Tech Team, Part 2](#)
- [ARDC Team Spotlight](#)
- [Contact Us!](#)
- [ARDC's Mission](#)

Happy Holidays – and it's Time for ARDC's Winter Break

ARDC will close for the year beginning on Saturday, December 21, 2024, and we'll return to the office on Monday, January 6, 2025. During our closure, you can continue to [submit grant applications](#) on our website. We'll be reviewing them in early February.

From the ARDC team, we would like to extend a giant **thank you** to our volunteers and to our contributors. Without your hard work, what we do here at ARDC wouldn't be possible.

To all of our community, we hope that you and yours have a fantastic holiday season. See you in 2025!

Upcoming Community Deadlines and Notices

Next Grant Application Deadline: The next deadline for submitting a grant application is **February 1, 2025**. Applications received after this date will be reviewed in April 2025, [so get your applications in now.](#)

Grantee Updates

The Hornet Amateur Radio Club's (HARC's) Upgrades to the USS Hornet



In January 2024, the [USS Hornet Amateur Radio Club \(HARC\)](#), after raising ~\$13,000 for their antenna restoration project, [was awarded \\$90,000 by ARDC](#). These funds allowed them to restore and modernize both the radio equipment and facilities on the [USS Hornet](#). The upgrades aim to further HARC's work in amateur radio education, promotion, and historical preservation. This past October, some of ARDC's staff had the opportunity to see the upgrades firsthand after attending [Pacificon 2024](#). Check out some of the highlights of their incredible work. [...more](#)

SkyHubLink: System Hardening and Equipment Upgrade



Image credit: Skyler Fennell W0SKY

In 2023, ARDC awarded SkyHubLink \$28,916 [to upgrade their SkyHubLink infrastructure](#), enhancing communications for public safety, scientific, and educational needs, among other things. Not only did they exceed their initial goals, they also completed the project within or under budget, allowing for the installation of more systems than originally planned. This project had a direct impact on their community, providing hands-on opportunities for hams of all skill levels. Participants engaged in tasks ranging from physical installation to software support. This work also had meaningful impacts on their youth amateur radio operators. One young ham installed a SkyHubLink portion in Salt Lake City, enabling coverage across the city, with a plan for expansion into nearby areas. Another young operator was inspired to pursue a career in electrical engineering after their involvement in the project. Finally, they were able to provide radio support for local events, namely the [Courage Classic Bicycle Tour](#), a race through the mountains around Vail, Leadville, and Copper Mountain, CO. To learn more about the communications infrastructure they used during this bicycle race, be sure to check out Chief Engineer Skyler Fennell's W0SKY video that describes the setup: tinyurl.com/2023courage.

Cal Poly: Direction Finding from Aerial Platforms with Amateur Radio Digital Arrays



Image credit: Cal Poly College of Engineering

In 2023, [ARDC awarded Payam Nayeri's Research Group at Cal Poly \\$51,945](#) to identify cost-effective high-altitude direction finding tools that serve as an alternative to drones and satellites. Through their work, they have developed a system that can detect targets on the ground using a distributed array of radios. This system requires calibration/synchronization of the radio system, development of direction of arrival (DoA) algorithms, and development of the remotely operated radio system. So far,

they have developed code for the calibration/synchronization of their radio system and code for their DoA algorithms. In addition to their software development, they have also begun assembly on said radio system. They plan to have the array fully assembled in winter 2025, with testing planned for early spring. To learn more about their work, check out a recently published article from [Cal Poly's College of Engineering](https://ceng.calpoly.edu/connection/2024/05/electrical-engineering-team-developing-balloon-based-radio-system-to-pinpoint-disaster-survivors/) website: <https://ceng.calpoly.edu/connection/2024/05/electrical-engineering-team-developing-balloon-based-radio-system-to-pinpoint-disaster-survivors/>.

What ARDC Has Been Up To

Stone Mountain Hamfest

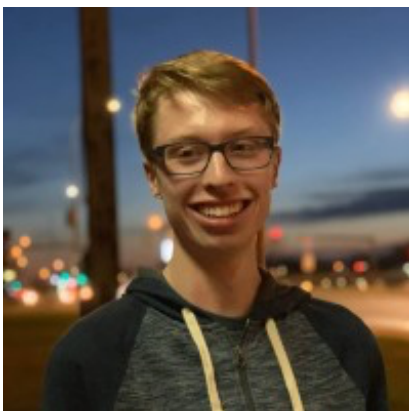


The [Stone Mountain Hamfest](#) happened from November 2-3 in Lawrenceville, GA. Communications Manager Rebecca Key KO4KVG attended. At the hamfest, Rebecca was able to catch up with [ARDC ARRL Scholarship](#) parent James Lea WX4TV, also of [Shack-in-a-Box](#), where he gave a brief update about the opportunities and scientific research that his children, Faith Hannah KD3Z and Hope ND2L, have been pursuing. James also noted that the scholarships helped make these opportunities possible for his children. Rebecca was also able to speak with prospective grantees, who came ready with questions about submitting a proposal. Finally, she gave talks highlighting our latest 44Net news, grant updates, and our [GET initial findings](#). Thank you to the event chair Dallas Mellichamp N4DDM for a well-organized event!

ARDC Welcomes New Staff Members

As you might have seen, ARDC has been doing some hiring! We have recently welcomed two new team members to our staff: 44Net Program Manager [John Burwell KI5QKX](#) and Grants & Administrative Associate Adam Zimmer W0ZML. We are excited to have them join our team!

Adam Zimmer W0ZML



Adam Zimmer joined our staff on October 28, 2024. His role focuses on assisting ARDC's grantees with grant processing while also supporting ARDC's internal operations. We are excited to have Adam on the team! [...more](#)

Introducing New Members of ARDC's Tech Team, Part 2

On October 1, we welcomed [Technical Director Schuyler Erle N0GIS](#) to our team. In addition to Schuyler, we have also added two additional members to our tech team this year: IT and Development Manager Adam Lewis KC7GDY and 44Net Program Manager John Burwell KI5QKX.

Adam Lewis KC7GDY



Adam Lewis joined our staff on July 8, 2024. He has been a core member of our team, filling in major gaps, particularly following the unexpected loss of [Outreach Manager John Hays K7VE](#) earlier this year. In addition to supporting the 2024 [Technical Advisory Committee \(TAC\)](#), Adam's role focuses on ARDC's IT needs, and developing and maintaining training documentation for staff and volunteers, among other things. We are so grateful for everything that he has done on the team, and we are excited to have a new teammate! [...more](#)

John Burwell KI5QKX



John joined our staff on November 4, 2024. His role focuses on ARDC's 44Net community, leading related communications, development of documentation and training materials, and overseeing the administration of 44Net services, including the Portal and the Point-of-Presence (PoP) project. In joining the ARDC staff, John states, "ARDC has an incredible resource in its community. 44Net and the people behind it are living legends. It's absolutely a privilege to help ARDC help hams. I can't wait to see what comes next in this chapter of the ARDC story." [...more](#)

ARDC Team Spotlight

Brian Mileschosky N5ZGT



Brian is concluding his third year on the Grants Advisory Committee (GAC), where he served as the chair for 2024. When asked about the work he is most proud of, Brian states, "I'm most proud of the privilege of serving ARDC as GAC's chair this past year. It's been a humbling and memorable experience." Outside of ARDC, Brian is also president of [Rocky Mountain Ham Radio-New Mexico](#); an organizer of the annual [New Mexico QSO Party](#); and is on the judging committee for the [Amateur Radio Newsline Young Ham of the Year](#) award (and also a [past recipient](#) of said award!). On the air, he enjoys contesting, DXing, and experimenting with emerging technologies, and you can find him operating between 80m and 10 GHz. To learn more about Brian, check out his bio on

Dan Theisen KK7OZY



Dan is wrapping up his first year on the Technical Advisory Committee (TAC), getting acquainted with the team and various projects. In 2025, he looks forward to providing more direct support to the ARDC Point-of-Presence (PoP) and portal. A ham for two years, Dan got his general ticket earlier this year while attending [/dev/hack](#) in Seattle. On the air, Dan spends most of his time operating FT-8 between 10 and 80m, and he's also interested in operating other digital modes. Outside of ARDC and ham radio, he is a network engineer for Seattle Public Schools and enjoys biking, bowling, and spending time with friends. You can learn more about Dan by visiting his [QRZ.com](https://www.qrz.com) page.

Thank you both for your contributions toward carrying out our [mission](#) at ARDC!

Contact Us!

We always want to hear from you:

- Visit our website: ardc.net
 - General info: contact@ardc.net
 - Information and questions about grants: giving@ardc.net
 - 44Net issues: contact@ardc.net
 - Groups.io: ardc.groups.io
 - Twitter / X: [@ARDC_73](https://twitter.com/ARDC_73)
 - Facebook: [Amateur Radio Digital Communications](https://www.facebook.com/AmateurRadioDigitalCommunications)
 - LinkedIn: [Amateur Radio Digital Communications](https://www.linkedin.com/company/AmateurRadioDigitalCommunications)
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ARDC's Mission

The mission of Amateur Radio Digital Communications (ARDC) is to support, promote, and enhance digital communication and broader communication science and technology, to promote amateur radio, scientific research, experimentation, education, development, open access, and innovation in information and communication technology.

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